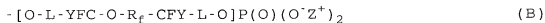
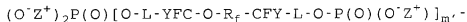


TREATMENT OF METAL SUBSTRATA WITH  
(PER)FLUOROPOLYETHER COMPOUNDS

ABSTRACT

Use in the treatment of metal substrata and their alloys, of mono- and bifunctional (per)fluoropolyether compounds having the following structures:



wherein:  $m' = 0-20$ ;  $n = 0-8$ ;  $q = 1-8$ ; L is an organic group selected from  $-CH_2-(OCH_2CH_2)_n-$ ,  $-CO-NR'-(CH_2)_q-$ , with  $R' = H$  or  $C_1-C_4$  alkyl;

Z = H, alkaline metal or  $NR_4$  group with R = H or  $C_1-C_4$  alkyl;

Y = F,  $CF_3$ ;  $m = 1, 2, 3$ , preferably 1, 2;

W is a group  $-Si(R_1)_\alpha(OR_2)_{3-\alpha}$  with  $\alpha = 0, 1, 2$ ,  $R_1$  and  $R_2$  equal to or different from each other are  $C_1-C_6$  alkyl groups optionally containing one or more ether O,  $C_6-C_{10}$  aryl groups,  $C_7-C_{12}$  alkyl-aryl or aryl-alkyl groups;

$R_f$  is a perfluoropolyether chain comprising the following units:  $(CFXO)$ ,  $(CF_2CF_2O)$ ,  $(CF_2CF_2CF_2O)$ ,  $(CF_2CF_2CF_2CF_2O)$ ,  $(CF_4R_5CF_2CF_2O)$ ,  $(CF(CF_3)CF_2O)$ ,  $(CF_2CF(CF_3)O)$ .